

File 155:MEDLINE(R) 1966-1995/Nov W2  
(c) format only 1995 Knight-Ridder Info

Set Items Description

--- -----

?s respiratory(w)syncytial/ti

44243 RESPIRATORY/TI

1948 SYNCYTIAL/TI

S1 1730 RESPIRATORY(W)SYNCYTIAL/TI

?s s1 and (vaccin? or immuniz?)/ti

1730 S1

33904 VACCIN?/TI

12540 IMMUNIZ?/TI

S2 116 S1 AND (VACCIN? OR IMMUNIZ?)/TI

?s s1 and (propiolactone or ascorbic(w)acid or glycopyranoside)

1730 S1

485 PROPIOLACTONE

1 ASCOBIC

701717 ACID

1 ASCOBIC(W)ACID

16 GLYCOPYRANOSIDE

S3 1 S1 AND (PROPIOLACTONE OR ASCOBIC(W)ACID OR  
GLYCOPYRANOSIDE)

?s s1 and (propiolactone or ascorbic(w)acid or glycopyranoside)

1730 S1

485 PROPIOLACTONE

17714 ASCORBIC

701717 ACID

17692 ASCORBIC(W)ACID

16 GLYCOPYRANOSIDE

S4 1 S1 AND (PROPIOLACTONE OR ASCORBIC(W)ACID OR  
GLYCOPYRANOSIDE)

?s s1 and (propiolactone or ascorbic(w)acid or glucopyranoside)

1730 S1

485 PROPIOLACTONE

17714 ASCORBIC

701717 ACID

17692 ASCORBIC(W)ACID

1213 GLUCOPYRANOSIDE

S5 1 S1 AND (PROPIOLACTONE OR ASCORBIC(W)ACID OR  
GLUCOPYRANOSIDE)

?t s5/6/1

5/6/1

08097481 92235481

Infectious \*\*\*respiratory\*\*\* \*\*\*syncytial\*\*\* virus (RSV) effectively inhibits the proliferative T cell  
response to inactivated RSV in vitro. ?t s5/7/1

5/7/1

DIALOG(R)File 155:MEDLINE(R)

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08097481 92235481

✓ Infectious \*\*\*respiratory\*\*\* \*\*\*syncytial\*\*\* virus (RSV) effectively inhibits the proliferative T cell response to inactivated RSV in vitro. Preston FM; Beier PL; Pope JH

Sir Albert Sakzewski Virus Research Centre, Royal Children's Hospital, Brisbane, Queensland, Australia.

J Infect Dis (UNITED STATES) May 1992, 165 (5) p819-25, ISSN 0022-1899 Journal Code: IH3

Languages: ENGLISH

Document type: JOURNAL ARTICLE

The effect of respiratory syncytial virus (RSV) on the cellular immune response of human mononuclear cells in vitro was examined. Inhibition by RSV of the lymphocyte response to phytohemagglutinin in vitro was confirmed using cells from human umbilical cord blood. In addition, RSV significantly inhibited both the proliferative and T cell colony responses of human mononuclear cells to Epstein-Barr virus. An RSV-specific cellular immune response was induced in vitro by stimulation of mononuclear cells from RSV-seropositive donors with beta-\*\*\*propiolactone\*\*\*-inactivated RSV. This RSV-specific response was significantly inhibited by infectious RSV itself, and the inhibition was mediated by an extracellular factor produced by RSV-infected mononuclear cells. A similar inhibition in vivo of the RSV-induced cellular immune response may contribute significantly to delayed recovery from primary infection and to reduced resistance to subsequent infections.

?display sets

| Set | Items | Description   |
|-----|-------|---|
| S1  | 1730  | RESPIRATORY(W)SYNCYTIAL/TI  |
| S2  | 116   | S1 AND (VACCIN? OR IMMUNIZ?)/TI                                   |
| S3  | 1     | S1 AND (PROPIOLACTONE OR ASCORBIC(W)ACID OR GLYCOPYRANOSIDE) S4 1 |
| S1  |       | AND (PROPIOLACTONE OR ASCORBIC(W)ACID OR GLYCOPYRANOSID- E)       |
| S5  | 1     | S1 AND (PROPIOLACTONE OR ASCORBIC(W)ACID OR GLUCOPYRANOSID- E)    |

?s s2 and (inactiv? or kill?)

116 S2

78010 INACTIV?

56071 KILL?

S6 36 S2 AND (INACTIV? OR KILL?)

?t s6/6/1-36

?t s6/7/3,6,8,9,12,16,24,26,32,33,34

6/7/3

DIALOG(R)File 155:MEDLINE(R)

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09038236 94353236

✓ Prospects for a \*\*\*respiratory\*\*\* \*\*\*syncytial\*\*\* virus \*\*\*vaccine\*\*\*. Hall CB

Department of Pediatrics and Medicine, University of Rochester School of Medicine and Dentistry, NY 14642.

Science (UNITED STATES) Sep 2 1994, 265 (5177) p1393-4, ISSN 0036-8075 Journal Code: UJ7

Languages: ENGLISH

Document type: JOURNAL ARTICLE; REVIEW; REVIEW, TUTORIAL (16 Refs.)

6/7/6

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1995 Knight-Ridder Info. All rts. reserv.

08988327 94303327

An update on approaches to the development of \*\*\*respiratory\*\*\* \*\*\*syncytial\*\*\* virus (RSV) and parainfluenza virus type 3 (PIV3) \*\*\*vaccines\*\*\*.

Murphy BR; Hall SL; Kulkarni AB; Crowe JE Jr; Collins PL; Connors M; Karron RA; Chanock RM  
Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD. Virus Res (NETHERLANDS) Apr 1994, 32 (1) p13-36, ISSN 0168-1702  
Journal Code: X98

Languages: ENGLISH

Document type: JOURNAL ARTICLE; REVIEW; REVIEW, ACADEMIC RSV and PIV3 are responsible for about 30% of severe viral respiratory tract disease leading to hospitalization of infants and children. For this reason, there is a need to develop vaccines effective against these viruses. Since these viruses cause severe disease in early infancy, vaccines must be effective in the presence of maternal antibody. Currently, several strategies for immunization against these viruses are being explored including peptide vaccines, subunit vaccines, vectored vaccines (e.g., vaccinia-RSV or adenovirus-RSV recombinants), and live attenuated virus vaccines. The current status of these approaches is reviewed. In addition, the immunologic basis for the disease potentiation seen in vaccinees immunized with formalin-\*\*\*inactivated\*\*\* RSV during subsequent RSV infection is reviewed. The efficacy of immunization in the presence of maternal antibody is discussed. Much progress for a RSV and PIV3 vaccine has been made and successful immunization against each of these pathogens should be achieved within this decade. (101 Refs.)

6/7/8

DIALOG(R)File 155:MEDLINE(R)

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08873082 94188082

\*\*\*Respiratory\*\*\* \*\*\*syncytial\*\*\* virus \*\*\*vaccines\*\*\*: can we improve on nature?

Tristram DA; Welliver RC

Department of Pediatrics, State University of New York at Buffalo. Pediatr Ann (UNITED STATES) Dec 1993, 22 (12) p715-8, ISSN 0090-4481 Journal Code: OUB

Languages: ENGLISH

Document type: JOURNAL ARTICLE; REVIEW; REVIEW, TUTORIAL Both \*\*\*inactivated\*\*\* and live RSV candidate vaccines will continue to be tested in infants and young children. Sequential vaccination, with a first dose of live attenuated vaccine followed by boosting with intramuscular subunit vaccines, also is an option. We are encouraged by the fact that influenza subunit and cold-adapted live vaccines are both safe and immunogenic in infants and children of the same age group. Testing of RSV vaccines must proceed at a slower pace because of the phenomenon of vaccine-induced enhanced disease. Curiously, this phenomenon of disease enhancement has not been demonstrated in the case of \*\*\*inactivated\*\*\* influenza or parainfluenza virus vaccines. Another important step in the development of RSV vaccines is to determine a target population. Clearly, children with underlying cardiac or pulmonary disease would benefit from an RSV vaccine. It can be expected that 1% of all infants in the general population will be hospitalized for RSV infection during their first year of life. These infants also would appear to be good candidates for an RSV vaccine, but it is unclear how they would be identified before infection occurs. Immunization of the entire population of infants to protect these 1% would be feasible only if the vaccine were inexpensive and easily administered. (10 Refs.)

6/7/9

DIALOG(R)File 155:MEDLINE(R)

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08829251 94144251

Enhanced pulmonary pathology associated with the use of formalin-\*\*\*inactivated\*\*\*  
\*\*\*respiratory\*\*\* \*\*\*syncytial\*\*\* virus \*\*\*vaccine\*\*\* in cotton rats is not a unique viral phenomenon.  
Piedra PA; Wyde PR; Castleman WL; Ambrose MW; Jewell AM; Speelman DJ; Hildreth SW  
Department of Microbiology and Immunology, Baylor College of Medicine, Houston, TX 77030-3498.  
Vaccine (ENGLAND) Nov 1993, 11 (14) p1415-23, ISSN 0264-410X Journal Code: X6O  
Languages: ENGLISH  
Document type: JOURNAL ARTICLE

The specificity of viral antigens in the formalin-\*\*\*inactivated\*\*\*, alum-precipitated respiratory syncytial virus (FI-RSV) vaccine in augmenting the pulmonary inflammatory response was evaluated. Cotton rats were immunized with a FI-RSV vaccine derived from Vero cells, a monkey cell line, or HEp-2 cells, a human cell line. The FI-RSV/Vero and the FI-RSV/HEp-2 vaccines were prepared similarly to the original Lot-100 FI-RSV vaccine that was associated with enhanced disease in the mid-1960s field trials. Each vaccine was administered intramuscularly at various doses and intervals. At 1, 4 or 7 weeks after the last vaccine dose, cotton rats were challenged with 10(6) plaque-forming units of live RSV grown in HEp-2 cells. For controls, FI-parainfluenza, FI-HEp-2 and alum vaccines, and live RSV primary infection were used. For measuring virus replication and histopathology, lungs were harvested at 4 and 8 days postchallenge. A dose-response relationship to vaccine dose was observed for ELISA, neutralizing and antifusion antibodies. All animals given three doses or two of the higher doses of FI-RSV/Vero vaccine developed significant neutralizing antibody, were protected against pulmonary virus replication and had similar low levels of histopathology compared with live RSV and controls. Two immunizations of the lowest dose of FI-RSV/Vero vaccine did not induce neutralizing antibody, did not provide protection of the lung against RSV and did not enhance the pulmonary cellular response. However, FI-RSV/HEp-2 vaccine was associated with significant enhanced pulmonary histopathology despite inducing high titres of neutralizing antibody and protecting the lungs against RSV infection.(ABSTRACT TRUNCATED AT 250 WORDS)

6/7/12

DIALOG(R)File 155:MEDLINE(R)

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08469776 93179776

A human \*\*\*respiratory\*\*\* \*\*\*syncytial\*\*\* virus (RSV) primate model of enhanced pulmonary pathology induced with a formalin-\*\*\*inactivated\*\*\* RSV \*\*\*vaccine\*\*\* but not a recombinant FG subunit \*\*\*vaccine\*\*\*. Kakuk TJ; Soike K; Brideau RJ; Zaya RM; Cole SL; Zhang JY; Roberts ED; Wells PA; Wathen MW

Drug Safety Research and Infectious Diseases Research, Upjohn Co., Kalamazoo, Michigan.  
J Infect Dis (UNITED STATES) Mar 1993, 167 (3) p553-61, ISSN 0022-1899 Journal Code: IH3  
Languages: ENGLISH  
Document type: JOURNAL ARTICLE

Human respiratory syncytial virus (RSV) is the leading cause of severe bronchiolitis and pneumonia in infants. RSV vaccine development has been stifled for the past 23 years because infants vaccinated with formalin-\*\*\*inactivated\*\*\* (FI) RSV have experienced exacerbated disease upon RSV infection. This exacerbated disease phenomenon is poorly understood, in part because of the lack of a primate model that exhibits a similar exacerbated disease state. Vaccination of African green monkeys with either FI RSV or a genetically engineered subunit vaccine termed FG glycoprotein reduced replication of challenge virus. However, only vaccination with FI RSV induced an enhanced pulmonary pathologic response to RSV infection. Pulmonary inflammatory scores in the FG glycoprotein-vaccinated monkeys were no greater than in monkeys vaccinated with adjuvant alone. This is the first demonstration of RSV vaccine-induced enhanced pathology in a primate and illustrates that a subunit vaccine has the potential of circumventing this exacerbated disease phenomenon.

6/7/16

DIALOG(R)File 155:MEDLINE(R)

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08150599 92288599

Approaches to \*\*\*immunization\*\*\* against \*\*\*respiratory\*\*\* \*\*\*syncytial\*\*\* virus.

Wertz GW; Sullender WM

Biotechnology (UNITED STATES) 1992, 20 p151-76, ISSN 0740-7378 Journal Code: BIT

Contract/Grant No.: R37 AI12464, AI, NIAID; AI20181, AI, NIAID; F32AI07864, AI, NIAID

Languages: ENGLISH

Document type: JOURNAL ARTICLE; REVIEW; REVIEW, ACADEMIC (117 Refs.)

6/7/24

DIALOG(R)File 155:MEDLINE(R)

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06941777 89243777

Mechanism of lung injury in cotton rats \*\*\*immunized\*\*\* with formalin- \*\*\*inactivated\*\*\*  
\*\*\*respiratory\*\*\* \*\*\*syncytial\*\*\* virus. Piedra PA; Faden HS; Camussi G; Wong DT; Ogra PL

Department of Pediatrics, State University of New York, Buffalo 14222. Vaccine (ENGLAND) Feb 1989,  
7 (1) p34-8, ISSN 0264-410X Journal Code: X6O

Contract/Grant No.: AI-15939

Languages: ENGLISH

Document type: JOURNAL ARTICLE

Respiratory syncytial virus (RSV) seronegative cotton rats were immunized intramuscularly at four and eight weeks of age with either formalin- \*\*\*inactivated\*\*\*, alum-precipitated RSV grown in HEp-2 cell tissue cultures or virus-free HEp-2 cell tissue cultures similarly prepared. Sham-immunized animals served as controls. At 12 weeks of age, all animals were challenged with  $6 \times 10^5$  plaque forming units of live RSV via the intranasal route. Animals were \*\*\*killed\*\*\* at predetermined days and evaluated for RSV antibody, virus replication and pulmonary histopathology. Of animals immunized with \*\*\*inactivated\*\*\*-RSV, 88% developed neutralizing antibody to RSV. Virus replication in the lungs of such animals was significantly reduced compared with tissue-culture-immunized animals. Surprisingly, however, both groups exhibited pulmonary histopathology, characterized by polymorphonuclear and mononuclear interstitial infiltrates. The virus-immunized animals manifested a more severe inflammatory reaction that reached a peak earlier than the virus-free, tissue-culture-immunized control group. In contrast, sham-immunized animals, when infected with live RSV for the first time, developed little or no pulmonary histopathology. The data suggest that the pathogenesis of pulmonary injury during natural RSV infection in the immunized host is due primarily to prior sensitization to the virus. In the animal model, sensitization to non-viral tissue culture components also contributes to lung injury.

6/7/26

DIALOG(R)File 155:MEDLINE(R)

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06719376 89021376

Current approaches to the development of \*\*\*vaccines\*\*\* effective against parainfluenza and  
\*\*\*respiratory\*\*\* \*\*\*syncytial\*\*\* viruses. Murphy BR; Prince GA; Collins PL; Van Wyke Coelingh K;  
Olmsted RA; Spriggs MK; Parrott RH; Kim HW; Brandt CD; Chanock RM

Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases, Bethesda,  
Maryland 20892.

Virus Res (NETHERLANDS) Aug 1988, 11 (1) p1-15, ISSN 0168-1702 Journal Code: X98

Languages: ENGLISH

Document type: JOURNAL ARTICLE; REVIEW; REVIEW, TUTORIAL Vaccines against parainfluenza (PIV) and respiratory syncytial viruses (RSV) that are currently being developed include both live and subunit vaccines. Candidate live PIV vaccines that have been found to be attenuated and efficacious in rodents or primate models are (1) cold-adapted, temperature-sensitive mutants of PIV-type 3 that have been serially passaged at low temperature (20 degrees C) in simian kidney tissue culture; (2) protease-activation mutants (PIV-1-Sendai), which have mutations that decrease the cleavability of their F glycoprotein by host cell protease; (3) an animal virus, bovine PIV-3 virus, which is antigenically related to the human PIV-3 virus, and (4) vaccinia recombinant viruses bearing RSV or PIV-3 glycoproteins. Subunit RSV and PIV-3 viruses are being produced and evaluated as immunogens. A major concern with these vaccines is the possibility of disease potentiation following virus infection as occurred previously with formalin-\*\*\*inactivated\*\*\* measles and RSV vaccines. Studies indicate that PIV-3 and RSV glycoprotein vaccines are immunogenic and efficacious in animals but insufficient data exist to estimate their capacity to potentiate disease. However, since a cotton rat model is available to detect potentiated disease resulting from infection of cotton rats previously immunized with formalin-\*\*\*inactivated\*\*\* RSV vaccine, it is now possible to systematically evaluate new vaccines in experimental animals for disease potentiation before studies are initiated in humans. It is likely within the next several years that one or more of these PIV or RSV vaccines will be tested in humans for safety and immunogenicity. (58 Refs.)

6/7/32

DIALOG(R)File 155:MEDLINE(R)

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02743185 75150185

Potential of attenuated \*\*\*respiratory\*\*\* \*\*\*syncytial\*\*\* virus \*\*\*vaccine\*\*\* for infants and children.

Parrott RH; Kim HW; Brandt CD; Chanock RM

Dev Biol Stand (SWITZERLAND) 1975, 28 p389-99, Journal Code: E7V Languages: ENGLISH

Document type: JOURNAL ARTICLE

Respiratory syncytial virus (RSV) disease is a major cause of death and hospitalization in infancy and a frequent cause of morbidity throughout childhood. Serum antibody does not protect as is evident from the study of natural disease and use of \*\*\*killed\*\*\* vaccines. Local antibody responses occur in natural illness. Possibly serum antibody in the absence of local antibody plays a part in illness. We have studied local and serum antibody response to potential attenuated vaccines: a 26 degrees C adapted RSV and a ts mutant RSV. Both produced the desired infection as evidenced by virus recovery, serum and local antibody response. However, both appear to have had residual pathogenicity for young infants. This included mild bronchitis after the 26 degrees C RSV and mild rhinitis, which might be acceptable, but also fever and otitis in one infant after the ts RSV. Also, some of the virus recovered in the ts studies had wild type characteristics. An acceptable RSV vaccine strain will (a) infect without undergoing reversion or other genetic changes, (b) induce resistance to wild type virus, (c) cause no or very mild inflammatory changes such as the rhinitis associated with the vaccines thus far tried.

6/7/33

DIALOG(R)File 155:MEDLINE(R)

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01015759 69160759

Respiratory virus \*\*\*immunization\*\*\*. I. A field trial of two \*\*\*inactivated\*\*\* respiratory virus \*\*\*vaccines\*\*\*, an aqueous trivalent parainfluenza virus \*\*\*vaccine\*\*\* and an alum-precipitated \*\*\*respiratory\*\*\* \*\*\*syncytial\*\*\* virus \*\*\*vaccine\*\*\*.

Fulginiti VA; Eller JJ; Sieber OF; Joyner JW; Minamitani M; Meiklejohn G Am J Epidemiol (UNITED STATES) Apr 1969, 89 (4) p435-48, ISSN 0002-9262 Journal Code: 3H3

Languages: ENGLISH

Document type: CLINICAL TRIAL; JOURNAL ARTICLE

6/7/34

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1995 Knight-Ridder Info. All rts. reserv.

01015758 69160758

\*\*\*Respiratory\*\*\* \*\*\*syncytial\*\*\* virus disease in infants despite prior administration of antigenic  
\*\*\*inactivated\*\*\* \*\*\*vaccine\*\*\*. Kim HW; Canchola JG; Brandt CD; Pyles G; Chanock RM; Jensen K;  
Parrott RH Am J Epidemiol (UNITED STATES) Apr 1969, 89 (4) p422-34, ISSN 0002-9262  
Journal Code: 3H3

Languages: ENGLISH

Document type: JOURNAL ARTICLE

?display sets

| Set | Items | Description   |   |
|-----|-------|---|---|
| S1  | 1730  | RESPIRATORY(W)SYNCYTIAL/TI                                      |   |
| S2  | 116   | S1 AND (VACCIN? OR IMMUNIZ?)/TI                                 |   |
| S3  | 1     | S1 AND (PROPIOLACTONE OR ASCORBIC(W)ACID OR GLYCOPYRANOSIDE) S4 | 1 |
| S1  |       | AND (PROPIOLACTONE OR ASCORBIC(W)ACID OR GLYCOPYRANOSID- E)     |   |
| S5  | 1     | S1 AND (PROPIOLACTONE OR ASCORBIC(W)ACID OR GLUCOPYRANOSID- E)  |   |
| S6  | 36    | S2 AND (INACTIV? OR KILL?)                                      |   |

?s s2/6/1-116

> > > Invalid syntax

?t s2/6/1-116

?t s2/7/1,3,36,37,52,56,71,106

2/7/1

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1995 Knight-Ridder Info. All rts. reserv.

09383424 95313424

✓ Current approaches to the development of \*\*\*vaccines\*\*\* against disease caused by \*\*\*respiratory\*\*\*  
\*\*\*syncytial\*\*\* virus (RSV) and parainfluenza virus (PIV). A meeting report of the WHO Programme for  
\*\*\*Vaccine\*\*\* Development.

Crowe JE Jr

Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases, Bethesda, MD  
20892, USA.

Vaccine (ENGLAND) Mar 1995, 13 (4) p415-21, ISSN 0264-410X Journal Code: X6O

Languages: ENGLISH

Document type: MEETING REPORT

The paramyxoviruses respiratory syncytial virus (RSV) and parainfluenza virus type 3 (PIV3) are the  
two most common agents of severe lower respiratory tract disease in infants and children throughout the  
world. RSV causes yearly epidemics of bronchiolitis and pneumonia in infants and young children, while PIV3  
is a common cause of bronchiolitis, pneumonia and croup. Together these two agents account for up  
to 30% of all hospitalizations of infants and young children for respiratory tract disease. A licensed  
vaccine is not currently available for either of these viruses. Development of vaccines against diseases caused by

RSV and PIV3 is one of the priorities of the Global Programme for Vaccines (GPV). On 27 March 1994, GPV sponsored a workshop in Nyon, Switzerland, to review the status of vaccine development for these pathogens and to explore new methods of immunization that might be applied to the prevention of diseases caused by RSV and PIV. Furthermore, the World Health Organization (WHO) wished to assess progress in the development of methodologies to rescue infectious virus from cDNA clones of RSV and PIV3. This technology, when developed, will be extremely valuable in developing new vaccine candidates and in unravelling the genetic basis of attenuation of existing vaccines. This paper summarizes the findings presented at this one-day meeting.

2/7/3

DIALOG(R)File 155:MEDLINE(R)

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09303779 95233779

\*\*\*Respiratory\*\*\* \*\*\*syncytial\*\*\* virus--how soon will we have a \*\*\*vaccine\*\*\*?

Toms GL

Department of Virology, Medical School, University of Newcastle upon Tyne.

Arch Dis Child (ENGLAND) Jan 1995, 72 (1) p1-3, ISSN 0003-9888 Journal Code: 6XG

Languages: ENGLISH

Document type: JOURNAL ARTICLE

2/7/36

DIALOG(R)File 155:MEDLINE(R)

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08150599 92288599

Approaches to \*\*\*immunization\*\*\* against \*\*\*respiratory\*\*\* \*\*\*syncytial\*\*\* virus.

Wertz GW; Sullender WM

Biotechnology (UNITED STATES) 1992, 20 p151-76, ISSN 0740-7378 Journal Code: BIT

Contract/Grant No.: R37 AI12464, AI, NIAID; AI20181, AI, NIAID; F32AI07864, AI, NIAID

Languages: ENGLISH

Document type: JOURNAL ARTICLE; REVIEW; REVIEW, ACADEMIC (117 Refs.)

2/7/37

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1995 Knight-Ridder Info. All rts. reserv.

08043714 92181714

\*\*\*Vaccination\*\*\* against \*\*\*respiratory\*\*\* \*\*\*syncytial\*\*\* virus: problems and progress.

Toms GL

Division of Virology, Medical School, University of Newcastle upon Tyne, U.K.

FEMS Microbiol Immunol (NETHERLANDS) Oct 1991, 3 (5) p243-56, ISSN 0920-8534 Journal Code: AO3

Languages: ENGLISH

Document type: JOURNAL ARTICLE; REVIEW; REVIEW, ACADEMIC (126 Refs.)

2/7/52

DIALOG(R)File 155:MEDLINE(R)

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07441315 90348315



\*\*\*Respiratory\*\*\* \*\*\*syncytial\*\*\* virus: virology, diagnosis, and \*\*\*vaccination\*\*\*.

Toms GL

Department of Virology, University of Newcastle-upon-Tyne Medical School, United Kingdom.

Lung (UNITED STATES) 1990, 168 Suppl p388-95, ISSN 0341-2040 Journal Code: LA2

Languages: ENGLISH

Document type: JOURNAL ARTICLE; REVIEW; REVIEW, TUTORIAL Attempts to develop a respiratory syncytial virus vaccine have revealed the antigenic heterogeneity of the virus and have highlighted the difficulties of inducing protective responses in very young infants. Of the two subgroups of the virus, A and B, that cocirculate, A appears to be the most aggressive in infants, but protection against both will be required. Although a degree of protection is transferred from mother to the infant via the placenta and by breast feeding, the mechanisms of protection remain ill-understood and early hopes of exploiting this phenomenon have not been realized. The immune response to the virus in the very young is depressed but disease severity is not demonstrably linked to failure to control virus replication. Rather, immune mechanisms contribute directly to the development of bronchiolitis. The involvement of the immune response in the pathologic process increases the hazards of vaccination. Research is currently focused on the definition of viral epitopes necessary to induce only a protective immune response and their incorporation into a suitable vaccine vector. (24 Refs.)

2/7/56

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1995 Knight-Ridder Info. All rts. reserv.

07237228 90144228

The immunobiology of \*\*\*respiratory\*\*\* \*\*\*syncytial\*\*\* virus: prospects for a \*\*\*vaccine\*\*\*.

Norrby E; Akerlind B; Mufson MA

Department of Virology, Karolinska Institute, School of Medicine, Stockholm, Sweden.

Adv Exp Med Biol (UNITED STATES) 1989, 257 p147-53, ISSN 0065-2598 Journal Code: 2LU

Languages: ENGLISH

Document type: JOURNAL ARTICLE; REVIEW; REVIEW, TUTORIAL (38 Refs.)

2/7/71

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1995 Knight-Ridder Info. All rts. reserv.

06719376 89021376

Current approaches to the development of \*\*\*vaccines\*\*\* effective against parainfluenza and \*\*\*respiratory\*\*\* \*\*\*syncytial\*\*\* viruses. Murphy BR; Prince GA; Collins PL; Van Wyke Coelingh K; Olmsted RA; Spriggs MK; Parrott RH; Kim HW; Brandt CD; Chanock RM

Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases, Bethesda, Maryland 20892.

Virus Res (NETHERLANDS) Aug 1988, 11 (1) p1-15, ISSN 0168-1702 Journal Code: X98

Languages: ENGLISH

Document type: JOURNAL ARTICLE; REVIEW; REVIEW, TUTORIAL Vaccines against parainfluenza (PIV) and respiratory syncytial viruses (RSV) that are currently being developed include both live and subunit vaccines. Candidate live PIV vaccines that have been found to be attenuated and efficacious in rodents or primate models are (1) cold-adapted, temperature-sensitive mutants of PIV-type 3 that have been serially passaged at low temperature (20 degrees C) in simian kidney tissue culture; (2) protease-activation mutants (PIV-1-Sendai), which have mutations that decrease the cleavability of their F glycoprotein by host cell protease; (3) an animal virus, bovine PIV-3 virus, which is antigenically related to the human PIV-3 virus, and (4) vaccinia recombinant viruses bearing RSV or PIV-3 glycoproteins. Subunit RSV and PIV-3 viruses are being produced and evaluated as immunogens. A major concern with these vaccines is the possibility of disease potentiation following virus infection as occurred previously with formalin-inactivated measles and

RSV vaccines. Studies indicate that PIV-3 and RSV glycoprotein vaccines are immunogenic and efficacious in animals but insufficient data exist to estimate their capacity to potentiate disease. However, since a cotton rat model is available to detect potentiated disease resulting from infection of cotton rats previously immunized with formalin-inactivated RSV vaccine, it is now possible to systematically evaluate new vaccines in experimental animals for disease potentiation before studies are initiated in humans. It is likely within the next several years that one or more of these PIV or RSV vaccines will be tested in humans for safety and immunogenicity. (58 Refs.)

2/7/106

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1995 Knight-Ridder Info. All rts. reserv.

01110313 69255313

\*\*\*Vaccine\*\*\* against \*\*\*respiratory\*\*\* \*\*\*syncytial\*\*\* virus. Lancet (ENGLAND) Aug 9 1969, 2 (615) p311, ISSN 0023-7507 Journal Code: LOS

Languages: ENGLISH

Document type: JOURNAL ARTICLE

?s s1 and animal(3n)model?

1730 S1

2444021 ANIMAL

402035 MODEL?

56579 ANIMAL(3N)MODEL?

S7 41 S1 AND ANIMAL(3N)MODEL?

?t s7/6/1-41

?t s7/6/11, 28, 38

7/6/11

08607358 93317358

A lamb model for human \*\*\*respiratory\*\*\* \*\*\*syncytial\*\*\* virus infection.

7/6/28

05186533 84110533

\*\*\*Respiratory\*\*\* \*\*\*syncytial\*\*\* virus infection in mice.

7/6/38

03246127 77148127

\*\*\*Respiratory\*\*\* \*\*\*syncytial\*\*\* virus infections. Comments. ?t s7/7/11, 28, 38

7/7/11

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1995 Knight-Ridder Info. All rts. reserv.

08607358 93317358

A lamb model for human \*\*\*respiratory\*\*\* \*\*\*syncytial\*\*\* virus infection. Lapin CD; Hiatt PW; Langston C; Mason E; Piedra PT

Department of Microbiology and Immunology, Baylor College of Medicine, Houston, Texas 77030.

Pediatr Pulmonol (UNITED STATES) Mar 1993, 15 (3) p151-6, ISSN 8755-6863 Journal Code: OWH

Languages: ENGLISH

Document type: JOURNAL ARTICLE

Respiratory syncytial virus (RSV) is the most important cause of bronchiolitis and pneumonia in young children. The development of an \*\*\*animal\*\*\* \*\*\*model\*\*\* of RSV disease serves to better understanding the pathophysiology of airway disease from RSV infection in infants and children. Groups of six lambs were inoculated intratracheally (IT) or intranasally (IN) with a human strain of RSV (H-RSV). For controls 8 lambs received IT virus-free cell lysate. Tachypnea and fever were observed significantly more often following IT than following IN inoculation of H-RSV or IT placebo (for tachypnea: 20 of 69 days, 5 of 63 days, and 3 of 89 days, respectively,  $P < 0.001$ ; for fever: 6 of 69 days, 0 of 63 days, and 1 of 89 days, respectively,  $P < 0.02$ ). Nasal fluid production was significantly more frequent in both IT (14 of 69 days) and IN (15 of 63 days) groups than in the placebo group (2 of 87 days,  $P < 0.001$ ). Postvaccination geometric mean titers (GMT, arithmetic transformation of  $\log_2$ ) of RSV-specific neutralizing antibody were significantly increased in the IT H-RSV group compared with postplacebo GMTs at 1 week (72 vs. 6.7,  $P < 0.03$ ). By the second week postinoculation both H-RSV-infected groups had comparable levels of RSV-specific neutralizing antibody titers and had significantly greater GMTs for the second through to the fourth week than the placebo group (144, 128, and 4.8, respectively  $P < 0.0008$ ). Bacterial isolates of the upper airway were comparable among the three groups. Histopathology at day 28 postinoculation was unremarkable for the three study groups. (ABSTRACT TRUNCATED AT 250 WORDS)

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\*\*\*Respiratory\*\*\* \*\*\*syncytial\*\*\* virus infection in mice. Taylor G; Stott EJ; Hughes M; Collins AP  
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The A2 strain of human respiratory syncytial virus replicated in the nose and lung of BALB/c mice, with virus growing to higher titers in older animals than in younger animals. Virus was recovered from the nose between days 2 and 7 with peak titers on days 3 and 4, and from the lungs between days 2 and 9, with peak titers on days 4 through 6. Serum antibody developed 2 weeks after infection. Viral antigen was demonstrated in the alveolar cells of the lung by immunofluorescence. Histopathological changes included infiltration by mononuclear cells of the peribronchiolar and perivascular tissue, some interstitial thickening, and formation of multinucleated giant cells. Virus could not be recovered from the respiratory tract of mice inoculated with bovine strains of respiratory syncytial virus. Growth of the A2 strain of human respiratory syncytial virus in different cell lines affected its infectivity for mice. Infection of BALB/c mice with respiratory syncytial virus provides a highly reproducible model for the study of the pathogenesis of and mechanisms of immunity to this virus.

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\*\*\*Respiratory\*\*\* \*\*\*syncytial\*\*\* virus infections. Comments. Sieber OF Jr

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